S.#	Topic	Sub Topics	Question	Answer Option (A)	Answer Option (B)	Answer Option (C)	Answer Option (D)
1	Biodiversity (Acellular Life/Variety of Life)	Discovery of Viruses	It is very stable and allows viruses to exist in water, air, and the ground.	nucleoproteins	nucleocapsid	tail of virus	capsid
2	Biodiversity (Acellular Life/Variety of Life)	Viral diseases (AIDS)	The genome of the virus includes the	Deoxyribonucleic acid	Ribonucleic acid	amino acids	deoxyribonucleic acid and ribonucleic acids
3	Biodiversity (Acellular Life/Variety of Life)	classification of viruses	Where can viruses replicate?	Animals	Plants	Bacteria	All
4	Biodiversity (Acellular Life/Variety of Life)	Viral Disease	What type of virus is the smallpox virus?	DNA enveloped virus	RNA enveloped virus	DNA virus	RNA naked virus
5	Biodiversity (Acellular Life/Variety of Life)	Structure of Viruses	Viruses without nuclear envelope is called as?	icosahedral virus	naked virus	enveloped virus	bilayer virus
6	Biodiversity (Acellular Life/Variety of Life)	Viral diseases (AIDS)	There are 3 stages of HIV infection, which sequence is correct	AIDS, Chronic HIV, Acute HIV	Chronic HIV, AIDS, Acute HIV	Acute HIV, Chronic HIV, AIDS	all of them
7	Bio-Energetics	Anaerobic respiration, respiration without oxygen	If a molecule is reduced it gain	energy	electrons	hydrogen protons	all of above
8	Bio-Energetics	Anaerobic respiration, respiration without oxygen	The energy required to destabilize the existing chemical bond is called as _____	activation	destabalization	kinetic	free
9	Bio-Energetics	Light dependent reactions	Which of the following organisms have the greatest problem with photorespiration?	C4 plants	heterotrophs	C3 plants	CAM plants
10	Bio-Energetics	Light independent reactions	Hexokinase is the enzyme found in	glycolysis and pentose pathway	pentose pathway	glycolysis	Kreb's cycle
11	Bio-Energetics	Light independent reactions	what happened to glucose when it will administered orally___	digestion	excretion	circulation	respiration
12	Bio-Energetics	Calvin Cycle, oxidative phosphorylation, non oxidative phosphorylation	ATP synthase is located in the _____ of the mitochondrion	intermembrane space	outer membrane	matrix	inner membrane
13	Biological Molecules Enzymes	proteins	___ made the protective coatings around the plant organs_____	lipids	waxes	glycerols	glycolipids
14	Biological Molecules Enzymes	carbohydrates	Glycogen is present in all body except	Brain	Heart	Blood	Tissues
15	Biological Molecules Enzymes	proteins	This amino acid not found in proteins is	beta alanine	Glutamine	Tyrosine	Histidine
16	Biological Molecules Enzymes	Nucleic Acids (DNA, RNA)	In contrast to eukaryotic mRNA, prokaryotic mRNA contains	Can be polycistronic	Is synthesized with introns	Can only be monocistronic	Has a poly A tail
17	Biological Molecules Enzymes	Nucleic Acids (DNA, RNA)	Restriction endonucleases found in	Viruses	Bacteria	Eukaryotes	All of these
18	Biological Molecules Enzymes	Nucleic acids (DNA, RNA)	A fatty acid is composed of ___	acid group at one end	acid groups at both ends	amino group at one end	amino group at both ends
19	Cell Structure and Function	Cell membrane	Carbon dioxide passes through plasma membrane of cells by:	Active transport	Passive transport	Facilitated diffusion	Passive diffusion
20	Cell Structure and Function	Prokaryotic & eukaryotic cells	Which of the following cells do not possess a nucleus?	Sieve tube cells	Bacteria	Red blood cells	All of the above
21	Cell Structure and Function	Cell membrane	What was the unit membrane model?	Plasma membrane has lipid bilayer.	Proteins are embedded in the lipid bilayer.	Plasma membrane has charged pores for transport of materials which cannot penetrate through the lipid bilayer.	All of the above.
22	Cell Structure and Function	The cell theory	The cell theory is applicable to all organisms except:	Bacteria	Fungi	Algae	Viruses
23	Cell Structure and Function	cytoplasm and cell organelles	What part of the cell serves as an intracellular highway?	ER	Golgi apparatus	cell membrane	mitochondria
24	Coordination and Control/ Nervous and Chemical Coordination	Nervous coordination	Acetylcholine is an example of _____ .	Neurohormone	Neurotransmitter	Hormone	Pheromone
25	Coordination and Control/ Nervous and Chemical Coordination	Nervous coordination	Regulation of _____ is NOT a function of hypothalamus in humans.	Body temperature	Blood water potential	Urine osmolarity	Circadian rhythms & emotions
26	Coordination and Control/ Nervous and Chemical Coordination	Nervous coordination	Experience has no influence on this type of behaviour.	Kinesis	Imprinting	Habituation	Insight learning
27	Coordination and Control/ Nervous and Chemical Coordination	Chemical coordination	What is the true chemical nature of antidiuretic hormone?	It is a protein.	It is an amino acid derivative.	It is made from cholesterol.	It is a lipoprotein.
28	Coordination and Control/ Nervous and Chemical Coordination	Feedback mechanisms	One of these processes does not happen as a result of negative feedback mechanism in humans?	Secretion of insulin by pancreas in response to increased blood glucose concentration.	Secretion of oxytocin in response to dilation of cervix during childbirth.	Secretion of glucagon by pancreas in response to decreased blood glucose concentration.	All of the above.
29	Diversity among Animals	Phylum arthropoda	The only aquatic arthropods:	Crustaceans	Arachnids	Myriapods	Gastopods
30	Diversity among Animals	Phylum platyhelminthes	Flame cells in Planaria constitute the:	Digestive system	Reproductive system	Respiratory system	Excretory system
31	Diversity among Animals	Phylum coelenterata	Which statement correctly describes the alimentary canal of hydra?	The alimentary canal is formed from the endodermal cells.	The alimentary canal has a single opening.	The alimentary canal is sac-like.	All of the above.
32	Diversity among Animals	Phylum porifera	The outer body wall of sponges is made up of which cells?	Choanocytes	Pinacocytes	Mesenchymal cells	Cnidocytes
33	Diversity among Animals	Characteristics and diversity among the animals	In most triploblastic after embryonic development, the three layers are represented as?	Their functions in the body	Structures associated with them	Separate layers of cells	Structures formed from them
34	Enzymes	mechanism of action of enzymes	The substrate binds to specific region of enzyme called?	key	active site	hyperactive site	none of these
35	Enzymes	factors affecting rate of enzyme action	The reaction will proceed faster if the activation energy is?	high	low	remains same	none of these
36	Enzymes	mechanism of action of enzymes	The Induced fit model was introduced by Koshland in which of the following year?	1960	1961	1959	1966

37	Enzymes	enzyme inhibition	Which of the following best describes competitive inhibitors?	Do occupy active site	Destroy the structure of enzyme	Resemble structurally with substrate	both b and c
38	Enzymes	Introduction/Characteristics of enzymes	Which of the following statements about enzymes is false?	The Keq of a reaction remains unchanged in the presence of an enzyme	Enzymes speed up the rate of reaction in DNA synthesis	Harsh, acidic conditions can completely denature an enzyme	An enzyme is completely converted to product during metabolism
39	Evolution	Neo-Darwinism's and Natural selection	The genetic change in a population caused by natural selection is called?	polymorphism	specialization	gene linkage	adaptation
40	Evolution	Concepts of Evolution	Carolus Linnaeus was believer of which of the following?	special creation	natural selection	catastrophism	Inheritance of acquired characters
41	Evolution	Evidence of evolution	Most of the fossils are found in which of the following?	Metamorphic rocks	soil	Volcanic mountains	Sedimentary rocks
42	Evolution	Inheritance of acquired characteristics	A group of interbreeding individuals belonging to a particular species and sharing a common geopraphic area is called?	community	family	race	population
43	Evolution	Inheritance of acquired characteristics	Which condition can be explained by Lamarckism?	How giraffes got their long neck	How humans lost their tail	How humans became bipedal	all of these
44	Life processes in Animals and Plants (Nutrition/Gaseous exchange/Transport)	insectivorous plants	In which plant leaves are modified into a sac	pitcher plant	sundew	lichens	leguminous plants
45	Life processes in Animals and Plants (Nutrition/Gaseous exchange/Transport)	transpiration in plants	At night transpiration takes place by	stomata	lenticcels	cuticle	intercellular spaces
46	Life processes in Animals and Plants (Nutrition/Gaseous exchange/Transport)	blood vessels	Vasodilation occurs during muscles	relaxation	contraction	division	movement
47	Life processes in Animals and Plants (Nutrition/Gaseous exchange/Transport)	lymphatic system	Blood cells fomed in lymph nodes are	lymphocytes	a granulocytes	monocytes	all of above
48	Life processes in Animals and Plants (Nutrition/Gaseous exchange/Transport)	immune system	Antiserum is a serum containing	antigen	antitoxins	antibodies	all of above
49	Prokaryotes	Importance and control of bacteria	A bacterial cell envelop does not include	slime	campsule	cell wall	cell membrane
50	Prokaryotes	Menstrual Cycle	Gonadotropin-releasing hormone is secrted by	Hypothalamus	piturtary gland	thyroid	thalamus
51	Prokaryotes	Menstrual Cycle	Corticosteroids is released by	fetal adrenal gland	fetal thalamus	fetal hypothalamus	fetal bartholins gland
52	Prokaryotes	AIDs	Eye infection in new born babies is due to following sexually transmitted disease	gonorrhoa	Genital Herpes	Both a & b	Chlamydia
53	Prokaryotes	Shape and size of bacteria	The cell wall of Archaebacteria does not contain which of the following?	Glycoproteins	Polysaccharides	proteins	Peptidoglycan
54	Reproduction	Sexually Transmitted Diseases-AIDS	The human cells affected in HIV are which of the following?	RBCs	WBCs	Platelets	stem cells
55	Reproduction	Sexual and Asexual reproduction	In which organism males are haploid?	Aphids	mosquito	butterfly	honey bee
56	Reproduction	Menstrual cycle	Duration of menstrual cycle is how many days on average?	25	26	27	28
57	Reproduction	Sexual and Asexual reproduction	Which of the following is an ovoviviparous animal?	basking shark	humans	blue shark	all of these
58	Reproduction	male Reproductive Organs	Which of the following is found beneath the prostate gland?	vas deferens	seminal vesicle	urethra	cowper's gland
59	Support and Movement	● Cardiac Muscles	Cardiac muscles are the muscles of:	Kidney	Liver	Heart	Stomach
60	Support and Movement	● Skeletal Muscles	Skeletal muscles are also called striped or striated muscle because they show alternate light and dark bands e.g	Pentaceps	Triceps	Biceps	Triceps and biceps
61	Support and Movement	Structure of Skeletal Muscles	Skeletal muscles are composed of:	Myosin only	Actin only	Both actin and myosin	Actin, myosin, tropomyosin
62	Support and Movement	● Skeletal Muscles	Which of the following statement is incorrect about skeletal muscle fibres?	They are multinucleated	They are 1 -1 nm in diameter and surrounded by sarcolemma	They contain O2 storing molecules called hemoglobin	Their cytoplasm contains the high concentration of carbohydrates
63	Support and Movement	Types of muscles	All of the following features are unique to cardiac muscle cells except?	They are linked together via intercalated discs	There are gap junctions between cells	They form branching chains	They are non-striated
64	Variation and Genetics / Inheritance	Mendel's laws of inheritance	Colour of flower indicates _____ of the flower:	Genotype	Trait	Phenotype	None of them
65	Variation and Genetics / Inheritance	Sex linkages in drosophila	XXY in case of Drosophila is a:	Fertile male	Sterile female	Fertile female	Sterile male
66	Variation and Genetics / Inheritance	Gene linkages and crossing over	Crossing over occur between _____ of homologous chromosomes:	Sister pair of chromatid	Sister chromatids of homologous	Non-sister chromatin	All of them
67	Variation and Genetics / Inheritance	Gene linkages and crossing over	XO-XX type pattern of sex determination is found in:	Fruit fly	Protenor bug	Butterfly	All of them
68	Variation and Genetics / Inheritance	Inheritance of two trait	How many types of gametes possible when rrYy is present?	1	2	3	4